

RECD 5-1-53



Replace
Worn-Out Windows
with Non-Critical

INSULUX GLASS BLOCK

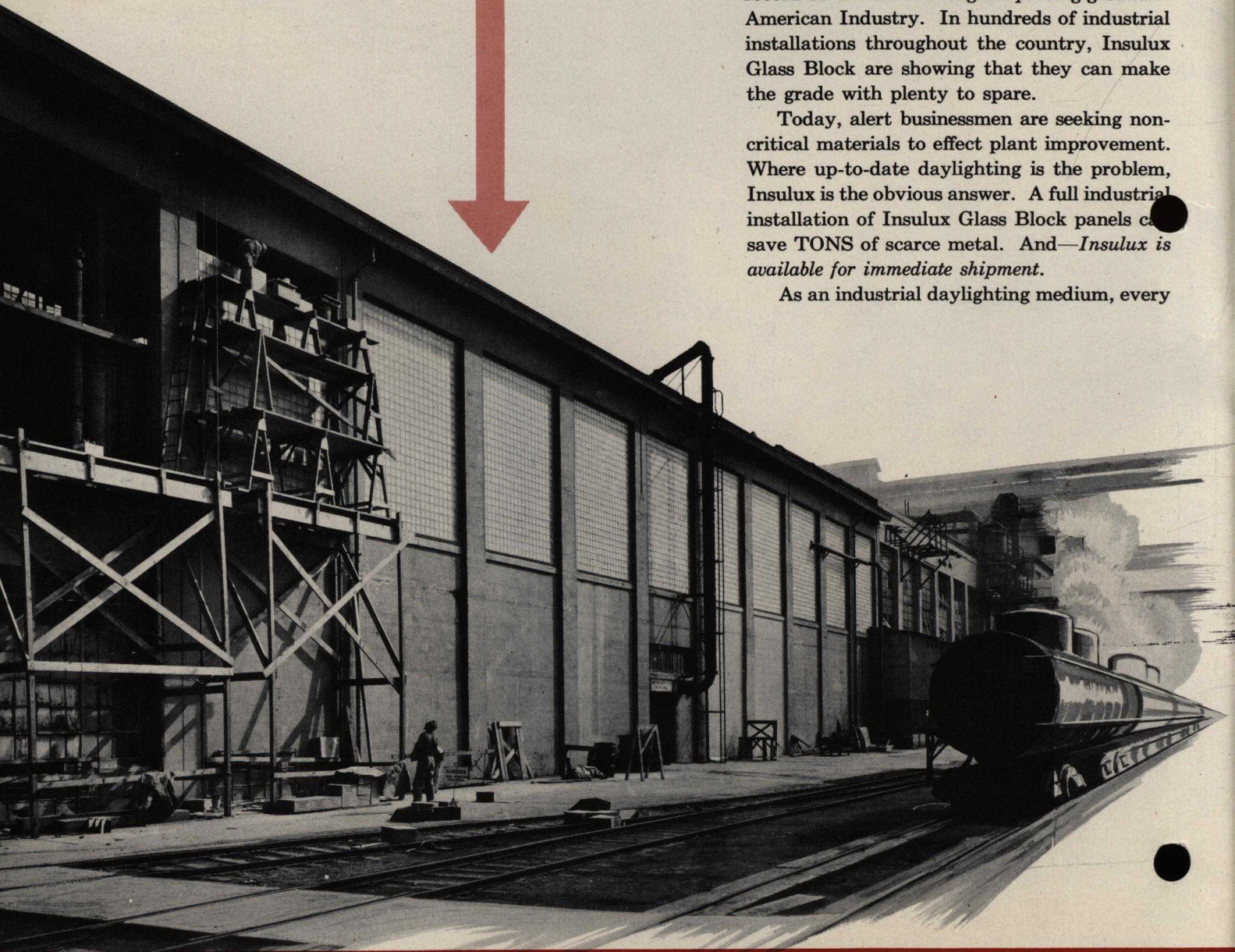
Why Industry uses **INSULUX**



Insulux Glass Block has proved its worth: *Proved* that it is one of the toughest, most wear-resistant fenestration materials ever developed; *proved* demonstrably that it offers a wealth of daylighting advantages; and *proved* that it is impervious to punishment on a scale heretofore thought impossible—and has chalked up this record on the *world's toughest proving ground*—American Industry. In hundreds of industrial installations throughout the country, Insulux Glass Block are showing that they can make the grade with plenty to spare.

Today, alert businessmen are seeking non-critical materials to effect plant improvement. Where up-to-date daylighting is the problem, Insulux is the obvious answer. A full industrial installation of Insulux Glass Block panels can save TONS of scarce metal. And—*Insulux is available for immediate shipment.*

As an industrial daylighting medium, every



GLASS BLOCK

feature of Insulux Glass Block works in its favor. Its resistance to the highest humidity conditions, its unusually low condensation point, and its imperviousness to most chemical fumes are just a few of the advantages that have sold plant management people again and again on Insulux fenestration. Fuel savings alone can spell good news to the company ledger.

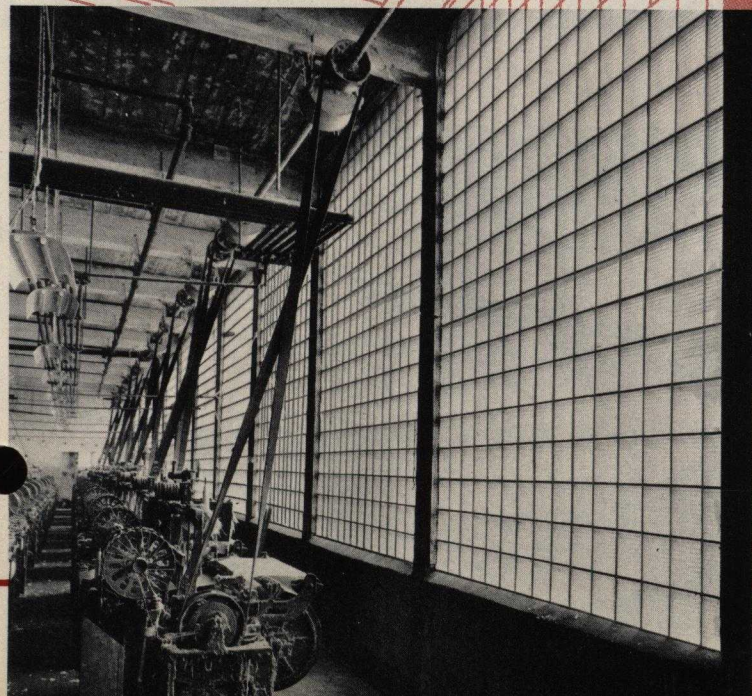
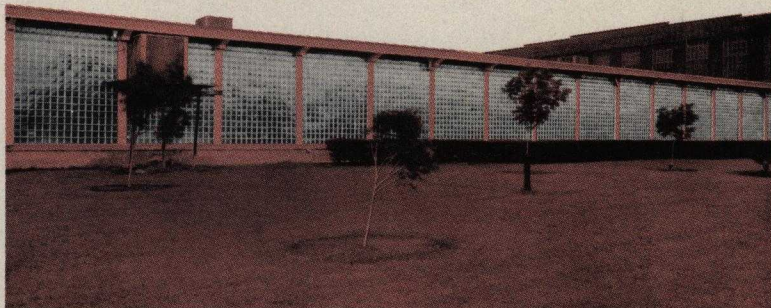
Permanence—indefinite and virtually trouble-free life—is a prime feature of Insulux fenestration. With negligible maintenance, savings from Insulux mount as the years go by.

Add the features of Insulux Glass Block—its durability, availability, light-directing power, humidity resistance, low condensation point, high insulation value, and nominal maintenance, and the answer to why Insulux Glass Block is an increasing favorite with industry everywhere is evident... Your fenestration dollar buys more when it buys Insulux.



Window Repair

The Problem: Badly deteriorated windows with accompanying high maintenance charges. *The Solution:* (below) Replacement with handsome panels of long-lasting Insulux. *The Result:* Trim good looks, top insulation value—and reduced heating costs.

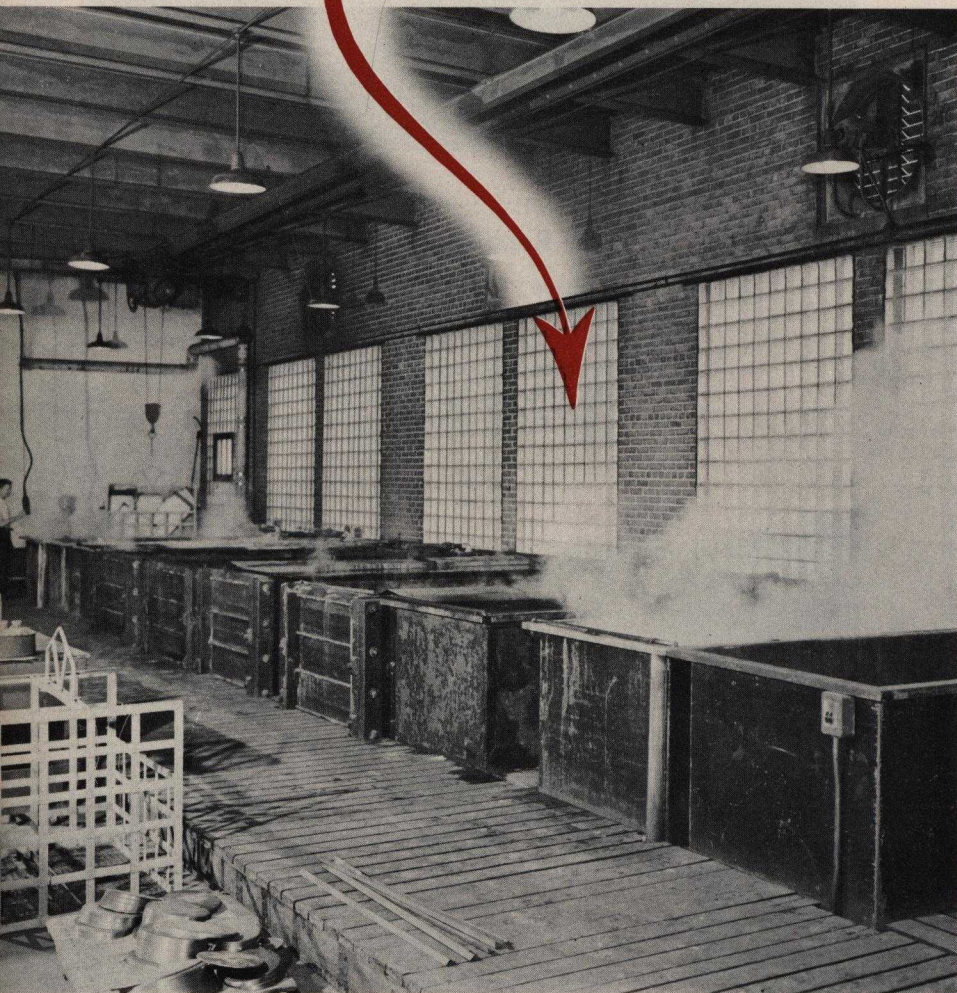


Impervious to Moisture...

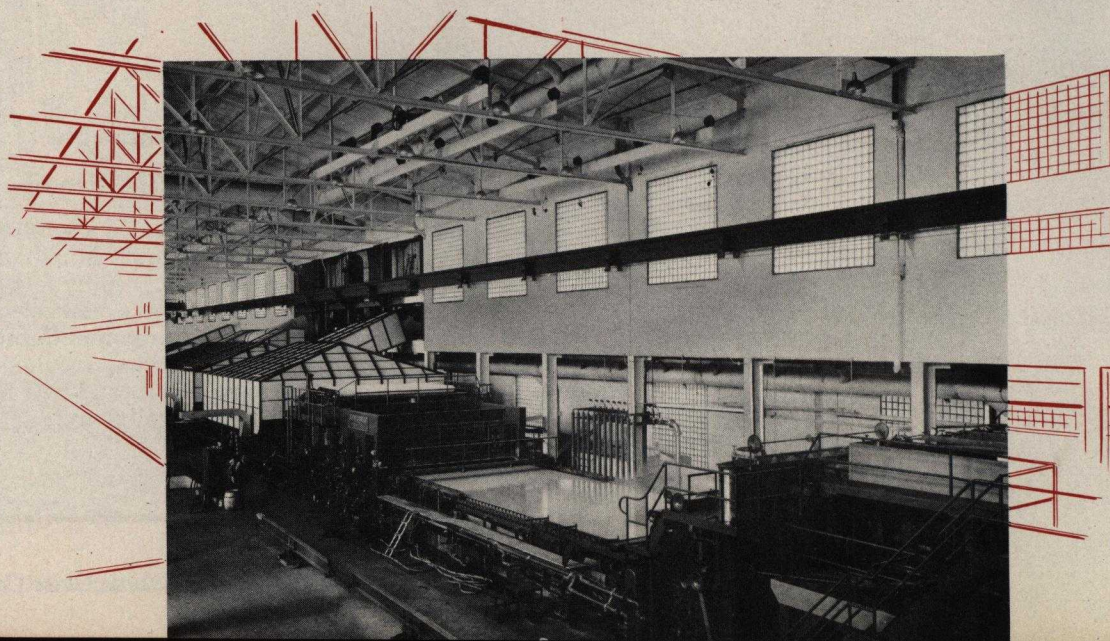
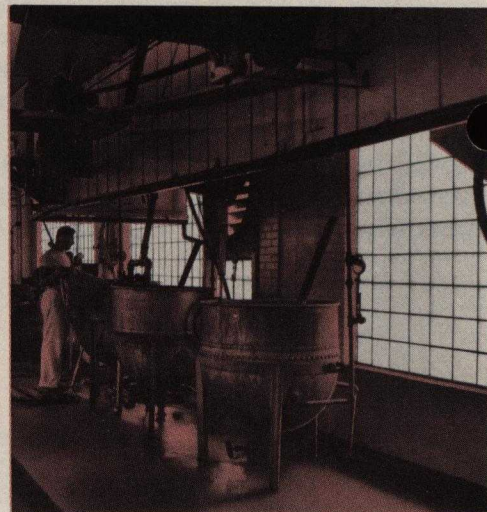
Proof Against The Ravages of Time

Moisture resistance is a job for glass block. The most extreme moisture conditions have no effect on Insulux fenestration, containing but two ageless elements, glass and mortar, for premium durability. After years of service, Insulux Glass Block panels retain that brand-new look, bright as the day of installation.

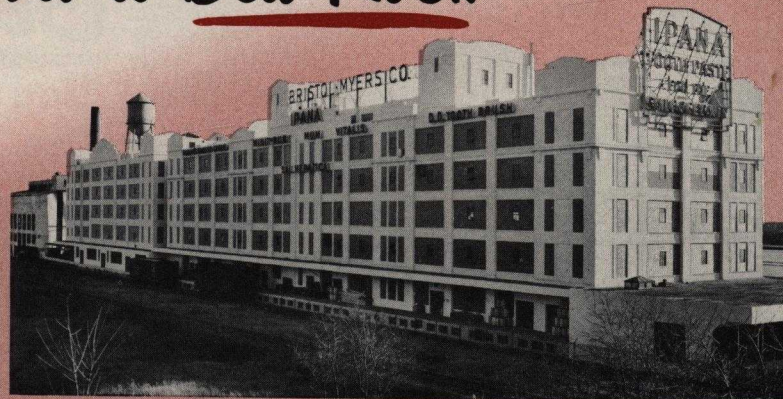
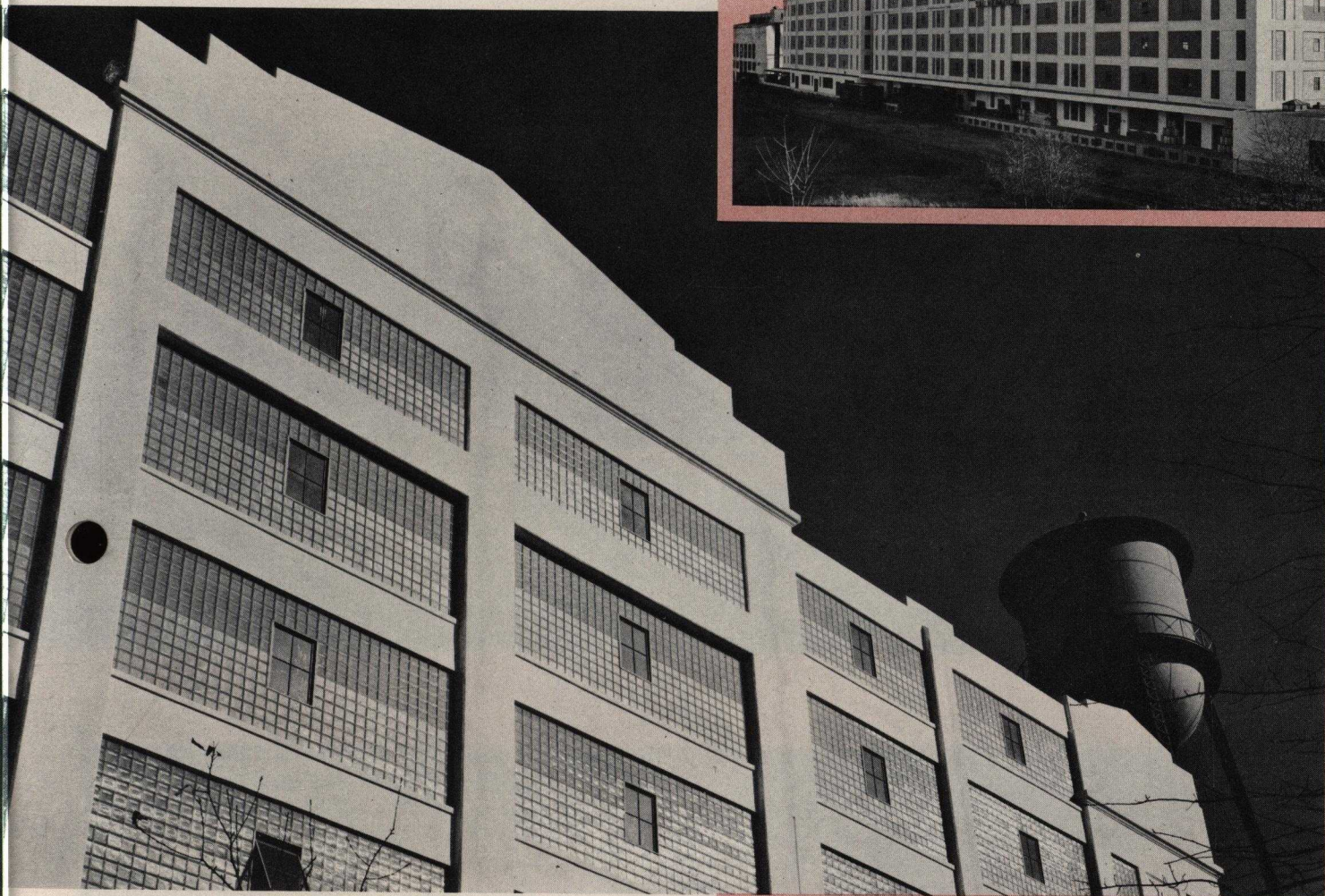
INSULUX GLASS BLOCK are really Tough...



Talk about a beating, these Insulux Glass Block panels are literally bathed in clouds of acid-laden moisture from pickling tanks (at left), but Insulux takes this licking with a smile and comes back year after year for more. Paper mills, food processing plants and other manufacturers with high-acid and high-humidity conditions find Insulux Glass Block are at their best as the going gets tougher. Window maintenance costs will take a tumble when you install Insulux.



...help cut maintenance costs to Bed Rock



For the ultimate in industrial appearance, Insulux Glass Block panels have no peer. Note the sunlighted beauty of the panels of the handsome Bristol-Meyers Co. plant, above, pharmaceutical manufacturing unit. Insulux Glass Block panels can make any factory architecturally more pleasing to the community, and a better place to work as well. For the unbeatable combination of well-lighted interiors and trim exteriors, your best fenestration investment is Insulux Glass Block.



... In textile manufacturing, where high humidity prevails, Insulux Glass Block panels can save costly maintenance. Textile mills are beating the maintenance problem with Insulux.



Better Looking ... and

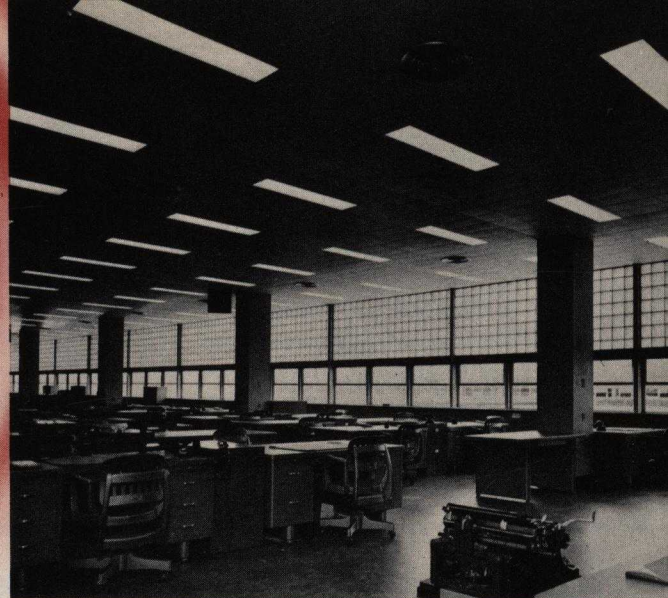


The **smart appearance** of Insulux Glass Block is evident in every line of the Chicago and North Western car shop (above), with the added bonus of more and better daylight for workers within. Insulux Glass Block is a hallmark of modern industrial practice.



Compare the uniform appearance of Insulux Glass Block panels with the uneven look of windows with shades adjusted "helter-skelter". Insulux panels are an integral part of the building and need no shade. They are unfailingly smart in appearance the year 'round. You're investing in beauty as well as light when you install Insulux.

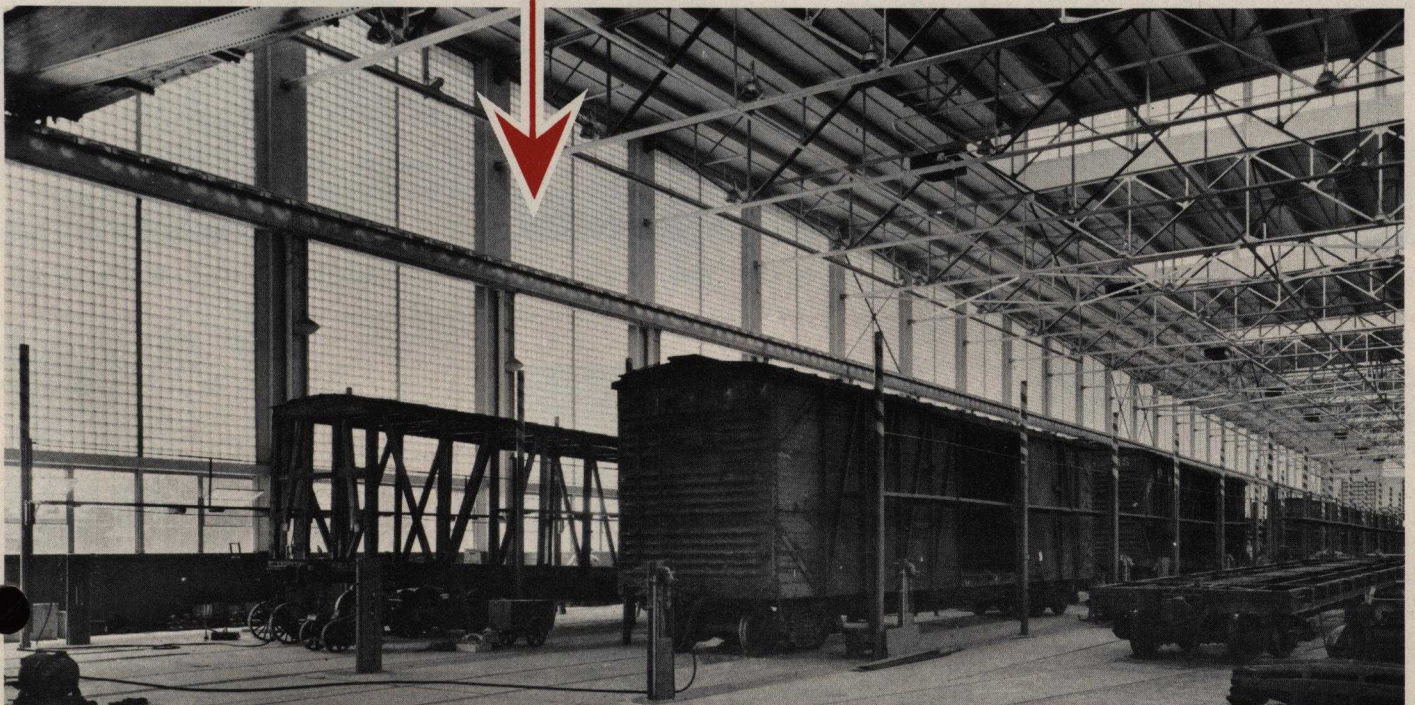
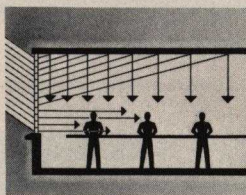
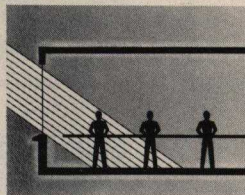
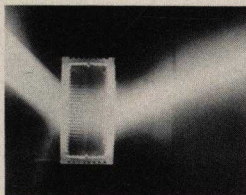
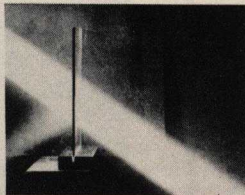
always Better Light



Office or industry, Insulux Glass Block can bring better work through better light. Insulux Fenestration Systems, composed of glass block panels over clear vision strips at eye level, provide quality daylighting together with vision and ventilation. The entire glass area is usable and need not be covered by shades or light-obscuring paints.

In huge shops (below) or in offices (above) glare and sharp contrasts are reduced to a minimum, making for better and more efficient working conditions. Washing is only an infrequent necessity with Insulux. In many industrial installations, hosing down is all that is necessary to restore panels to original brightness. Cleaning is never more than a matter of simple soap-and-water applications—no squeegee or wiping.

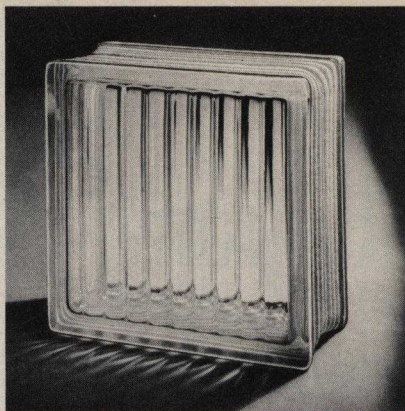
These Diagrams show the daylighting advantages of Insulux Glass Block. At left, daylight passes through clear sheet glass, striking absorbing floor surfaces. At right, see the action of Insulux Glass Block, bending light upward to strike the more reflective ceiling surfaces which reflect it down to work areas.



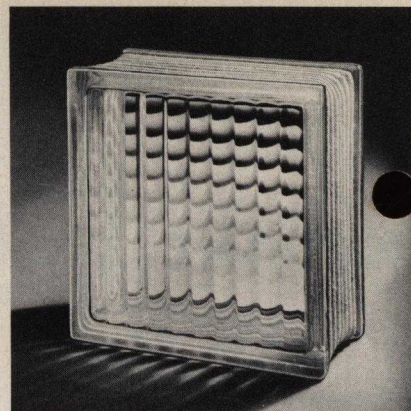
INSULUX

GLASS BLOCK

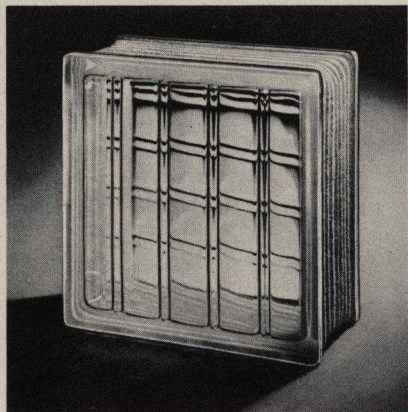
1951 DESIGNS. Do not use previous catalogs. All designs, shapes and sizes of Insulux Glass Block subject to change without notice.



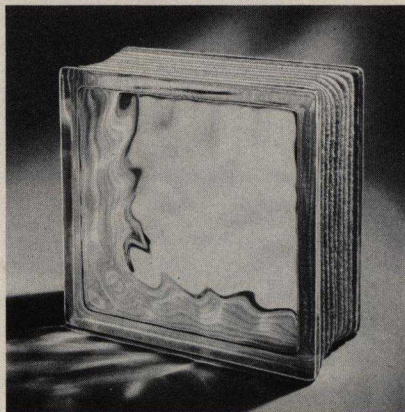
DESIGN NO. 07



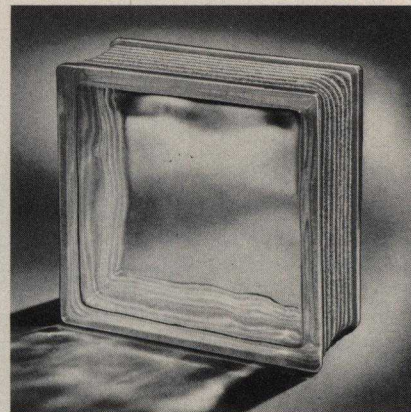
DESIGN NO. 16



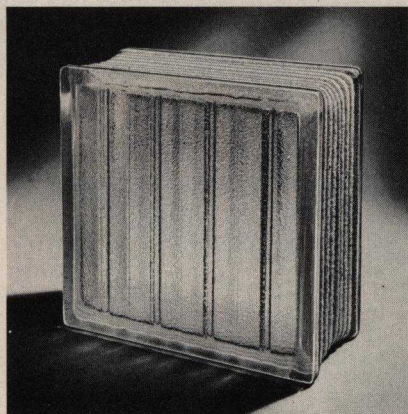
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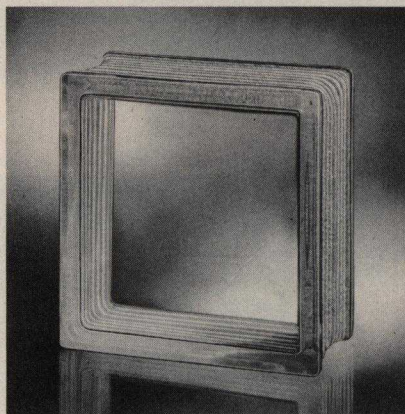
DESIGN NO. 30



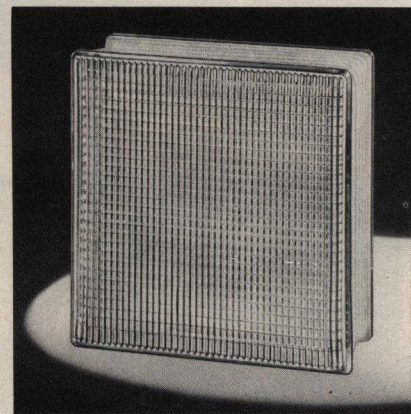
DESIGN NO. 31



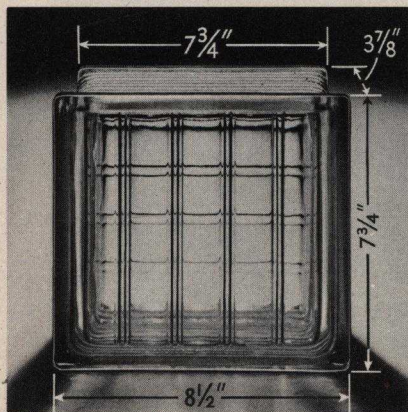
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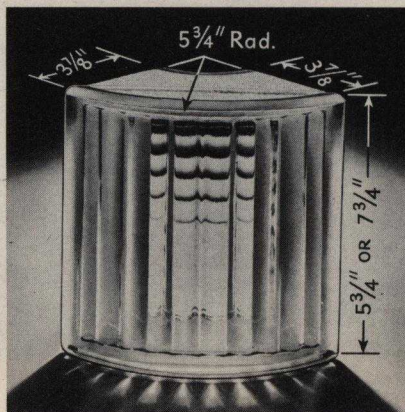
DESIGN NO. 70



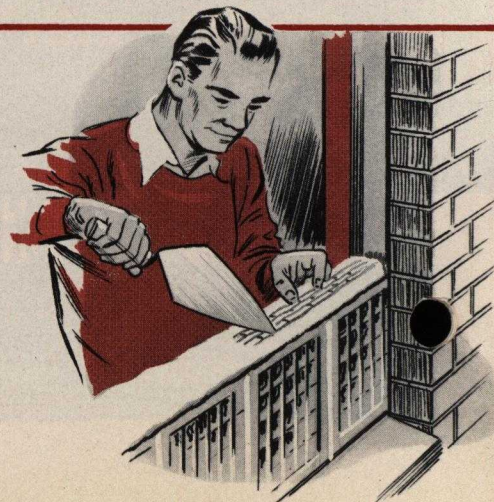
DESIGN NOS. 63 and 65



RADIAL BLOCKS



CORNER BLOCKS



Order by
These
Numbers

DESIGN NUMBERS

SQUARE
BLOCKS

CORNER
BLOCKS

Use two 5 3/4" corner
blocks with
11 3/4" square

RADIAL BLOCKS
7 3/4" HIGH

DEGREE OF "PRIVACY"

SMOOTH-FACE

RIBBED-FACE

To match corner blocks
Lay with ext. ribs vertical

INSULUX GLASS BLOCK

	07	207	307	407				Limited	•	•	Use No. 16 corner and radial blocks.
	16	216	316	416	216-C	316-C	316-R	Fair	•	•	Ribs vertical one interior face, horizontal on other interior face.
	17	217	317	417	217-C	317-C	317-R	Limited	•	•	Flutes vertical one interior face, horizontal on other interior face.
	30	230	330	430	230-C	330-C	330-R	Very Limited	•		Forms circular design. Lay in random pattern.
	31		331	431				Very Limited	•		Random design gives effect handmade glass. Use corner block No. 30.
	40	240	340	440	240-C	340-C	340-R	Good		•	Interior face stippled, exterior ribs are wide.
	70		370				370-R	None	•		Gives limited vision. May be inset in panels of other designs.
FUNCTIONAL BLOCKS FOR LIGHT CONTROL. Write for full data.	63		363			363-C	363-R	Complete		•	Directs light above horizontal for diffusion from ceiling down on work. New optical principle accepts light from wide sun angles and spreads it sidewise in room. Use only above eye level.
	65		365			365-C	365-R	Complete		•	
Number per carton		12	8	4	12	8	8				
Lbs. wgt. per carton		43	55 58	63	49 1/2	44 1/2	58				
Retail price, carton											

Companion to number 363. Does not direct light up, but spreads it evenly in horizontal and vertical planes. Use below eye level with 363. Diffusing qualities give excellent decorative lighting effects.

INSULUX ACCESSORIES

*Approx. quantity to
lay 1000 pcs. block

Based upon a panel
10'x10' (100 S.F.).
Since conditions
vary widely, quan-
tities are not guar-
anteed. See other
side for "Simpli-
fied Construction".



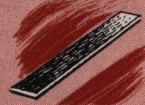
ASPHALT EMULSION

Asphalt dispersed
in water. Apply to
sill to break bond
between sill and
mortar.



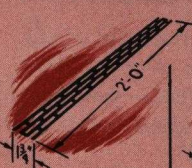
CAULKING COMPOUND

Use a gun-grade
non-hardening
type to water-
proof expansion
joints at heads
and jambs. Not
furnished by In-
sulux.



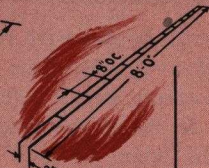
EXPANSION STRIPS

Use at jambs and
heads of panels. A
resilient glass fiber
pad 4 1/4" x 3/8" x
25".



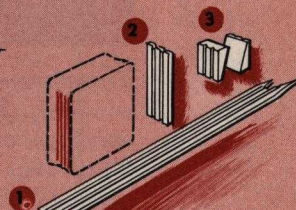
PANEL ANCHORS

Anchors panels
where no chase
used. Imbed in,
nail or bolt to
jambs. 20 ga. galv.
1 3/4" x 24".



WALL TIES

To reinforce pan-
els. Imbed in hori-
zontal mortar
joints every 24"
vertically, regard-
less of size of block.



SET-IN-WOOD

A prefabricated system for erecting
interior partitions without mortar.
Erection details sent on request.

1	1	1	2	2	3
10'	8'	6'	7 3/4"	11 3/4"	Pr.
strips	strips	strips	vert.	vert.	wedges

	5 3/4" Blocks	1/2 Gal.	1 1/2 Gals.	38 pcs.	20 pcs.	13 pcs.					
* 7 3/4" Blocks		1/3 Gal.	2 3/4 Gals.	67 pcs.	36 pcs.	23 pcs.	Write for erection details				
11 3/4" Blocks		2/3 Gal.	6 Gals.	150 pcs.	80 pcs.	100 pcs.					
How Packed	1, 5 Gal., Qts.	Not furnished by Insulux	72 pcs. (150 lin. ft.) to carton	25 to bundle	8,0,, long 50 to bundle	12 to a bundle	144 cart'n	72 Pr. Cart'n			
Retail Price											
	(PER GALLON)			(PER PIECE)	(PER BUNDLE)	(PER BUNDLE)	(PER BUNDLE)	(PER CARTON)			

WINDOW REPLACEMENT... STEP BY STEP

1

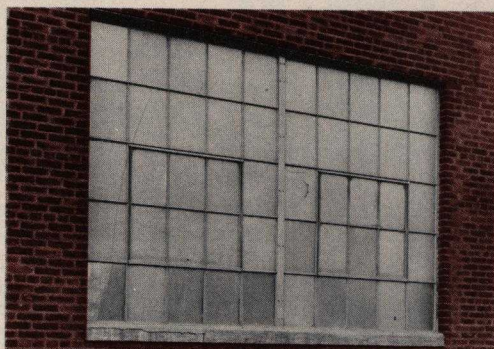


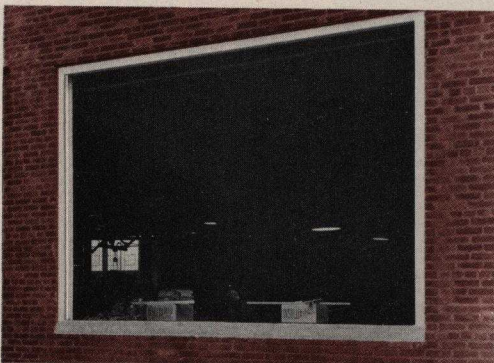
Exhibit "A": Worn-out window in need of replacement. Insulux Glass Block fills the bill, provides a wall of daylight to improve working conditions, boosts insulation value. Replacement with non-critical Insulux Glass Block and accessories will conserve scarce metal, cut maintenance.

2



Transformation begins with removal of old windows. Heavy tarpaulins over window openings protect interior from weather. Next step is repair or replacement of masonry sills when needed.

3

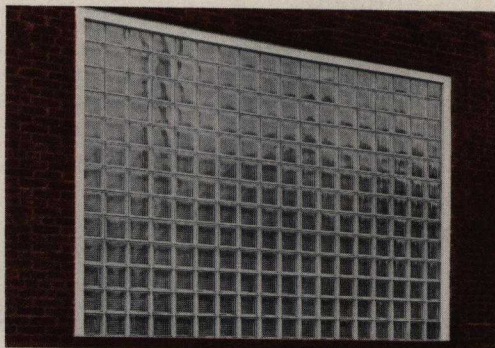


Proper opening size framed for glass block panel can be created with either a frame in 8" walls or with a chase in 12" and thicker walls. Sills may be built up with additional courses of brick to bring window opening to panel size.



4

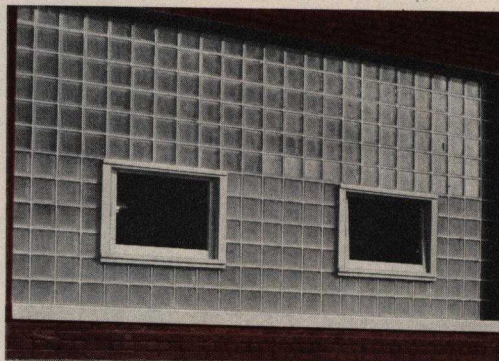
Glass block comes into the picture with laying-up in regular cement-lime mortar. Fiberglass expansion strips are installed at panel jambs and heads between glass block and present construction. Reinforcing wall ties are bedded in horizontal mortar joints 2' on vertical centers.



5

Hard to recognize as the same window opening when filled with an Insulux Glass Block panel, this wall of daylight provides a permanent seal against weather, quality daylighting the year 'round.

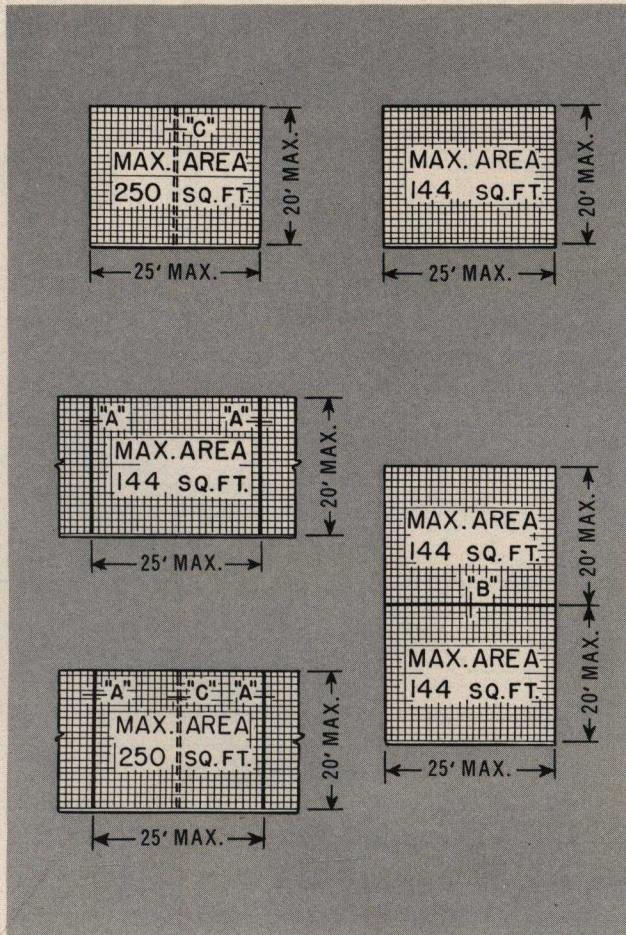
6



Window inserts are the solution where natural ventilation is required. Easily installed, these standard inserts come in a variety of types and sizes in either wood or metal frames. Windows can also be installed in continuous strips below panel.

PANEL SIZE AND AREA

DIMENSION TABLE



All panels more than 25 feet wide or 20 feet high or more than 144 square feet in area should be divided by mullions ("A") or shelf angles ("B"), as shown above, to provide expansion joints and reinforcement against air pressure. Panels more than 144 square feet in area but *not* more than 25 feet wide or 20 feet high may be braced by stiffeners ("C").

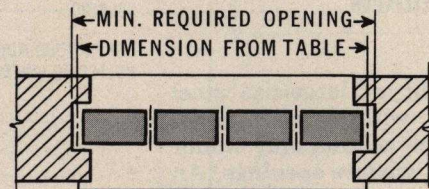
Wall Anchor Panels

Wall anchor-type panels should not be more than 10 feet wide or 100 square feet in area.

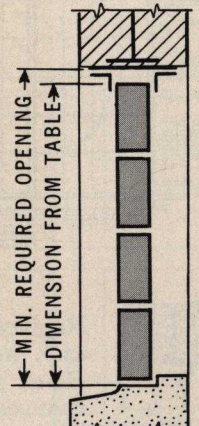
Underwriters' Laboratories

To qualify for Underwriters' Laboratories light fire-retardant rating for Class F Openings, panels must not exceed 12 feet in width or height nor 120 square feet in area.

To find minimum required opening size for glass block panels use dimensions below, adding $\frac{1}{2}$ " for width and $\frac{3}{8}$ " (plus maximum lintel deflection) for height. $\frac{1}{4}$ " mortar joints recommended.



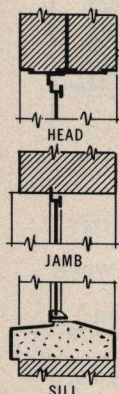
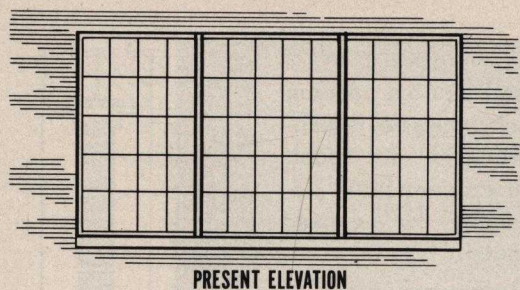
PLAN



SECT.

No. OF UNITS	5 3/4" x 5 3/4"		7 3/4" x 7 3/4"		11 3/4" x 11 3/4"	
	HEIGHT OR WIDTH 1/4" JOINTS	3/16" JOINTS	HEIGHT OR WIDTH 1/4" JOINTS	3/16" JOINTS	HEIGHT OR WIDTH 1/4" JOINTS	3/16" JOINTS
1	6"	5 15/16"	8"	7 15/16"	1'-0"	11 15/16"
2	1'-0"	11 7/8"	1'-4"	1'- 3 7/8"	2'-0"	1'-11 7/8"
3	1'-6"	1'- 5 13/16"	2'-0"	1'-11 13/16"	3'-0"	2'-11 13/16"
4	2'-0"	1'-11 3/4"	2'-8"	2'- 7 3/4"	4'-0"	3'-11 3/4"
5	2'-6"	2'- 5 11/16"	3'-4"	3'- 3 11/16"	5'-0"	4'-11 11/16"
6	3'-0"	2'-11 5/8"	4'-0"	3'-11 5/8"	6'-0"	5'-11 5/8"
7	3'-6"	3'- 5 9/16"	4'-8"	4'- 7 9/16"	7'-0"	6'-11 9/16"
8	4'-0"	3'-11 1/2"	5'-4"	5'- 3 1/2"	8'-0"	7'-11 1/2"
9	4'-6"	4'- 5 7/16"	6'-0"	5'-11 7/16"	9'-0"	8'-11 7/16"
10	5'-0"	4'-11 3/8"	6'-8"	6'- 7 3/8"	10'-0"	9'-11 3/8"
11	5'-6"	5'- 5 5/16"	7'-4"	7'- 3 5/16"	11'-0"	10'-11 5/16"
12	6'-0"	5'-11 1/4"	8'-0"	7'-11 1/4"	12'-0"	11'-11 1/4"
13	6'-6"	6'- 5 3/16"	8'-8"	8'- 7 3/16"	13'-0"	12'-11 3/16"
14	7'-0"	6'-11 1/8"	9'-4"	9'- 3 1/8"	14'-0"	13'-11 1/8"
15	7'-6"	7'- 5 1/16"	10'-0"	9'-11 1/16"	15'-0"	14'-11 1/16"
16	8'-0"	7'-11"	10'-8"	10'- 7"	16'-0"	15'-11"
17	8'-6"	8'- 4 15/16"	11'-4"	11'- 2 15/16"	17'-0"	16'-10 15/16"
18	9'-0"	8'-10 7/8"	12'-0"	11'-10 7/8"	18'-0"	17'-10 7/8"
19	9'-6"	9'- 4 13/16"	12'-8"	12'- 6 13/16"	19'-0"	18'-10 13/16"
20	10'-0"	9'-10 3/4"	13'-4"	13'- 2 3/4"	20'-0"	19'-10 3/4"
21	10'-6"	10'- 4 11/16"	14'-0"	13'-10 11/16"	21'-0"	20'-10 11/16"
22	11'-0"	10'-10 5/8"	14'-8"	14'- 6 5/8"	22'-0"	21'-10 5/8"
23	11'-6"	11'- 4 9/16"	15'-4"	15'- 2 9/16"	23'-0"	22'-10 9/16"
24	12'-0"	11'-10 1/2"	16'-0"	15'-10 1/2"	24'-0"	23'-10 1/2"
25	12'-6"	12'- 4 7/16"	16'-8"	16'- 6 7/16"	25'-0"	24'-10 7/16"
26	13'-0"	12'-10 3/8"	17'-4"	17'- 2 3/8"	26'-0"	25'-10 3/8"
27	13'-6"	13'- 4 5/16"	18'-0"	17'-10 5/16"	27'-0"	26'-10 5/16"
28	14'-0"	13'-10 1/4"	18'-8"	18'- 6 1/4"	28'-0"	27'-10 1/4"
29	14'-6"	14'- 4 3/16"	19'-4"	19'- 2 3/16"	29'-0"	28'-10 3/16"
30	15'-0"	14'-10 1/8"	20'-0"	19'-10 1/8"	30'-0"	29'-10 1/8"
31	15'-6"	15'- 4 1/16"	20'-8"	20'- 6 1/16"	31'-0"	30'-10 1/16"
32	16'-0"	15'-10"	21'-4"	21'- 2"	32'-0"	31'-10"
33	16'-6"	16'- 3 15/16"	22'-0"	21'- 9 15/16"	33'-0"	32'- 9 15/16"
34	17'-0"	16'- 9 7/8"	22'-8"	22'- 5 7/8"	34'-0"	33'- 9 7/8"

HOW TO REPLACE WINDOWS IN 12" BRICK WALLS



EXISTING CONSTRUCTION

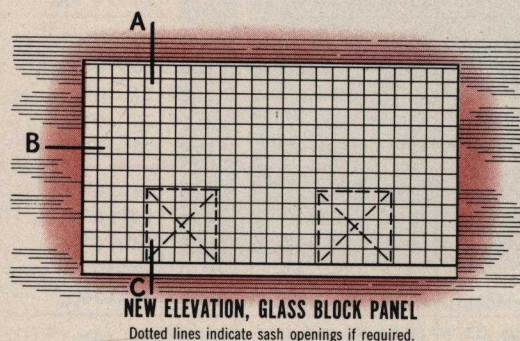
Replacement of large-size steel sash areas with Insulux Glass Block panels entails only minor changes in window openings. An inexpensive process, this "make-ready" for panel installation is a relatively easy and quick job for laborers.

(1) **Sill**—If in good condition and provides level bearing for glass block, no alteration necessary. Coat with asphalt. Level sill as shown in Detail "C" if required.

(2) **Jamb**—Cut chase in brick work to size shown. (Automatic hammer or carborundum saw for this task—optional according to availability and preference.) True up sides with mortar if necessary and install expansion strips.

(3) **Head**—Retain present sash angle for outside stop. After block is installed bolt wood stop to lintel as shown.

The opening is now ready for panel installation. Proceed according to specifications in Sweet's Architectural Catalog (sent on request).



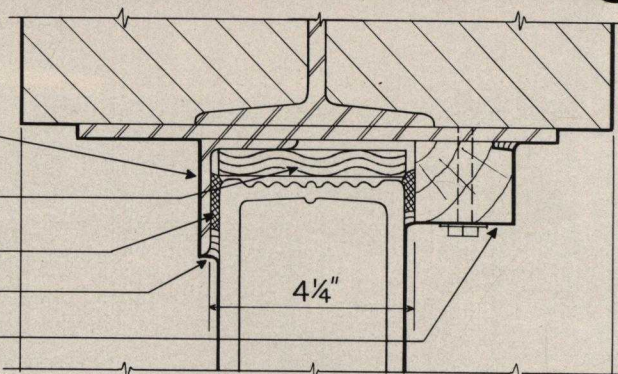
EXISTING SASH $\angle$

EXPANSION JOINT
Keep Mortar Out
EXPANSION STRIP

PACK OAKUM TIGHT

CALKING

CONTINUOUS WOOD STRIP
BOLTED TO LINTEL



HEAD DETAIL "A"

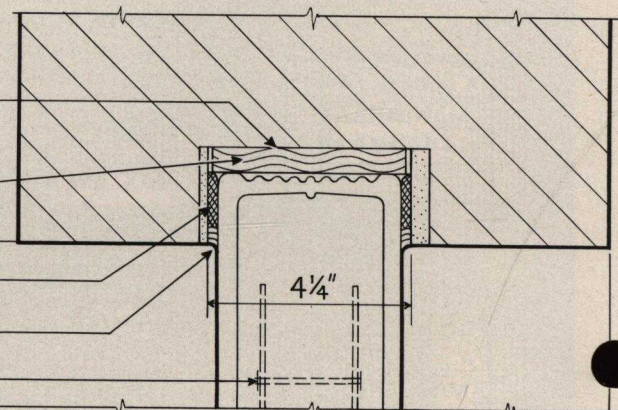
CUT CHASE IN MASONRY
AND PARGE SIDES
WITH MORTAR

EXPANSION JOINT
Keep Mortar Out
EXPANSION STRIP

RAM OAKUM TIGHT

CALKING

WALL TIES



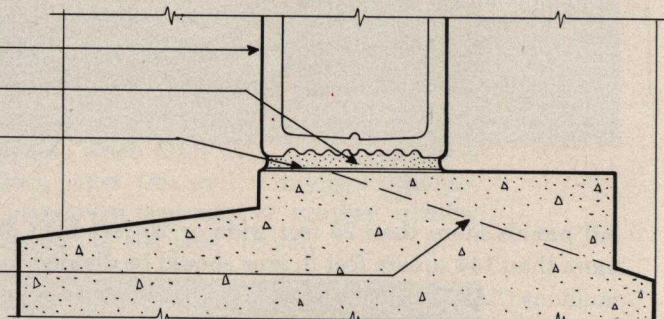
JAMB DETAIL "B"

INSULUX GLASS BLOCK

MORTAR BED

1/2" COAT OF
ASPHALT EMULSION

ROUGHEN PRESENT
SILL AND BUILD UP
WITH CONCRETE
AS REQUIRED



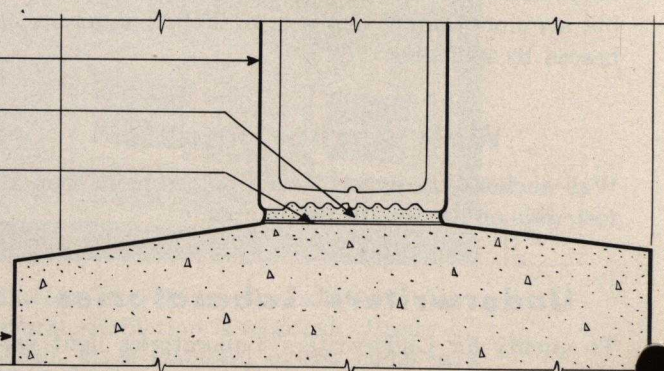
SILL DETAIL "C"

INSULUX GLASS BLOCK

MORTAR BED

1/2" COAT OF
ASPHALT EMULSION

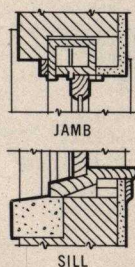
NEW SILL, IF
PRESENT ONE IS
IN BAD CONDITION



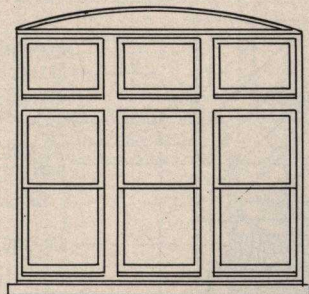
ALTERNATE SILL DETAIL "C"

3" = 1'-0"

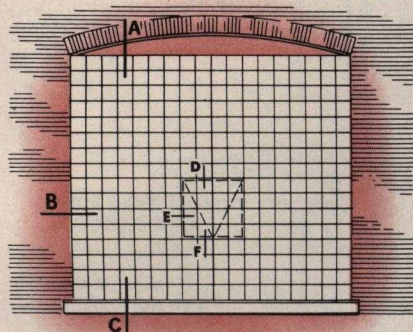
HOW TO REPLACE ARCHED HEAD WINDOWS IN 12" BRICK WALLS



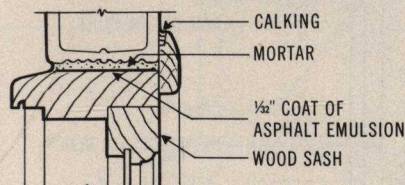
EXISTING
CONSTRUCTION



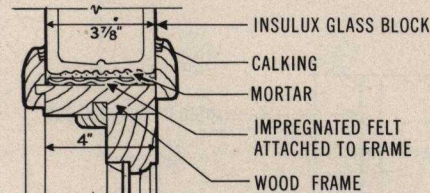
PRESENT ELEVATION
WOOD SASH OPENING



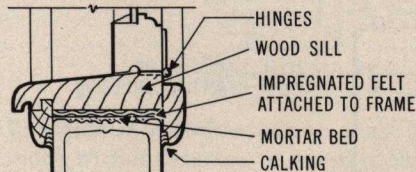
NEW ELEVATION, GLASS BLOCK PANEL
Dotted lines indicate sash openings if required.



HEAD DETAIL "D"



JAMB DETAIL "E"



SILL DETAIL "F"

HINGED SASH *

2"x4" BLOCKING BOLTED
TO BRICK ARCH

CALKING

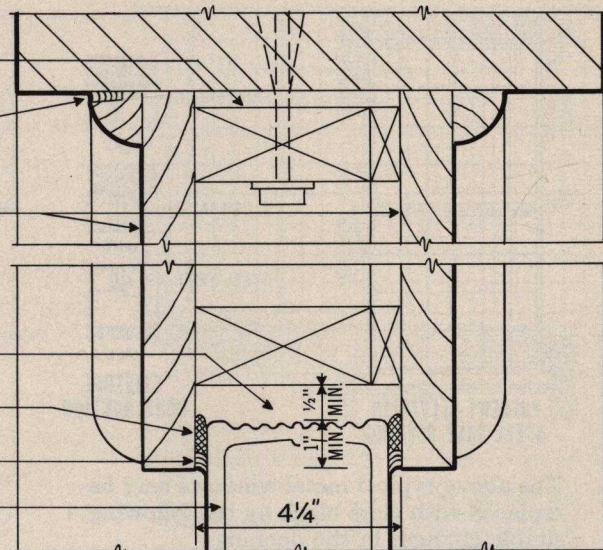
3/8" FLEXBOARD OR
WOOD TRIM SHAPED
TO ARCH

EXPANSION JOINT
Keep Mortar Out

RAM OAKUM TIGHT

CALKING

INSULUX GLASS BLOCK



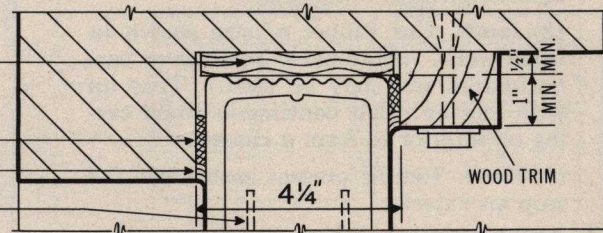
HEAD DETAIL "A"

EXPANSION JOINT
Keep Mortar Out
EXPANSION STRIP

RAM OAKUM TIGHT

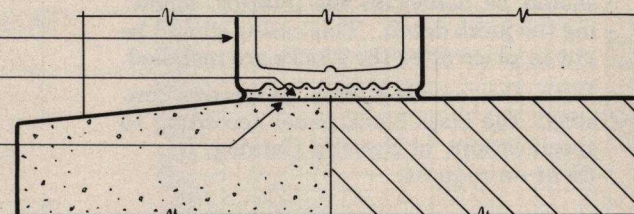
CALKING

WALL TIES



JAMB DETAIL "B"

INSULUX GLASS BLOCK
MORTAR BED
1/2" COAT OF
ASPHALT EMULSION



SILL DETAIL "C"

Arched head wood windows may be replaced with glass block by removing the sash and altering the opening as follows:

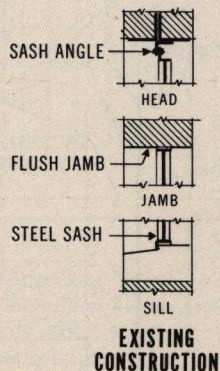
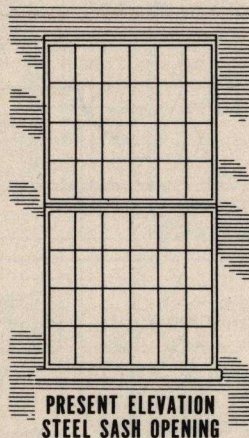
- (1) **Sill.** Coat the sill with asphalt emulsion.
- (2) **Jamb.** Bolt wood stops on interior to form a chase with the existing brick on the exterior.
- (3) **Head.** Bolt wood blocking to arched masonry head to take exterior and interior wood trim or Flexboard. Interior trim should be installed after block is in place.

With the opening thus prepared, construct the glass block panel according to specifications in Sweet's Catalog. (Sent on request.)

3" = 1'-0"

* Except as noted.

HOW TO REPLACE WINDOWS IN 8" BRICK WALLS

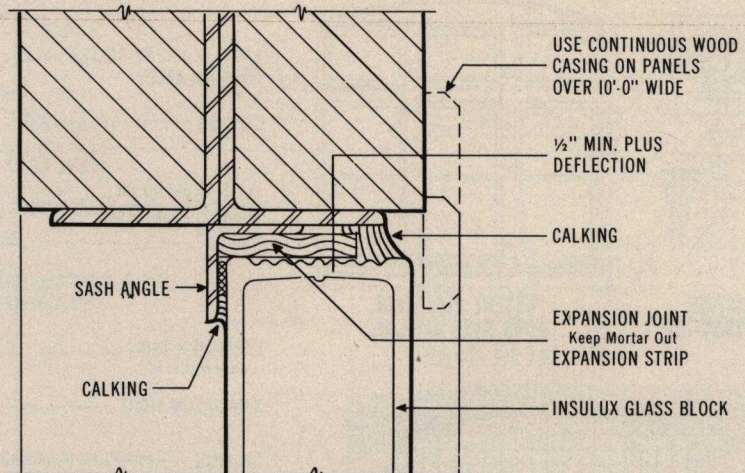
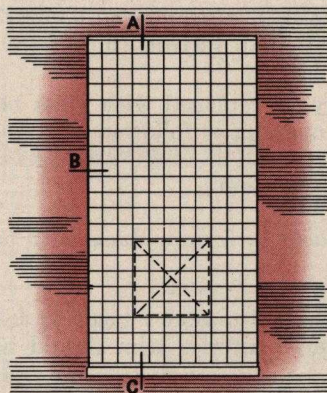


The above typical metal windows may be replaced with glass block by the following simple changes in the opening:

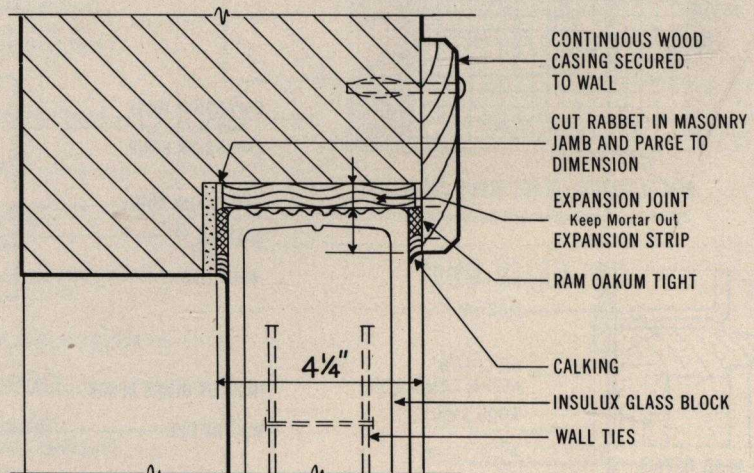
- (1) **Sill.** No alteration. Coat with asphalt emulsion.
- (2) **Jamb.** Cut rabbet of size shown in brick work. (Automatic hammer or carbide saw may be used.) True up with mortar. Bolt continuous wood casing on interior to form a chase.
- (3) **Head.** Retain present sash angle for stop on exterior.

Alternate Head: Where panels are wider than 10 ft., a continuous wood casing, should be bolted on the interior, following the jamb detail. This casing should be put in place after the blocks are installed.

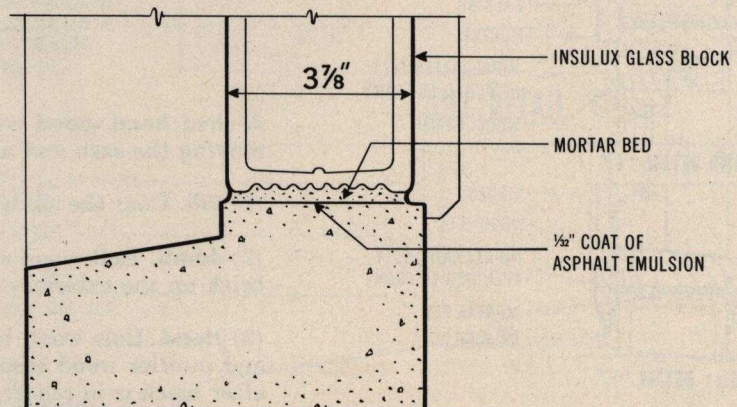
With the opening thus prepared, construct the glass block panel according to specifications in Sweet's Catalog. (Sent on request).



HEAD DETAIL "A"



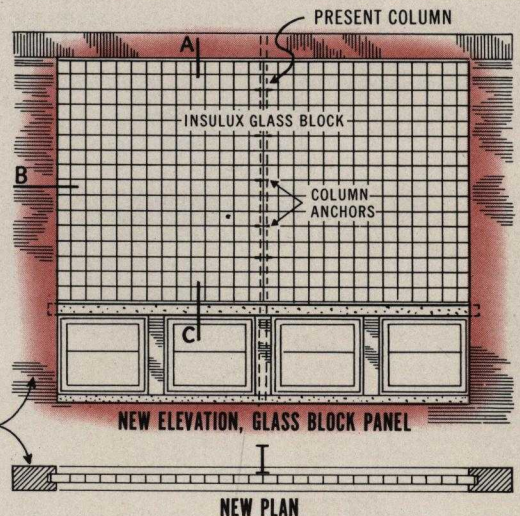
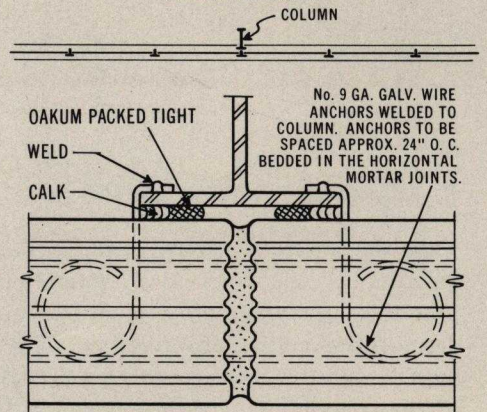
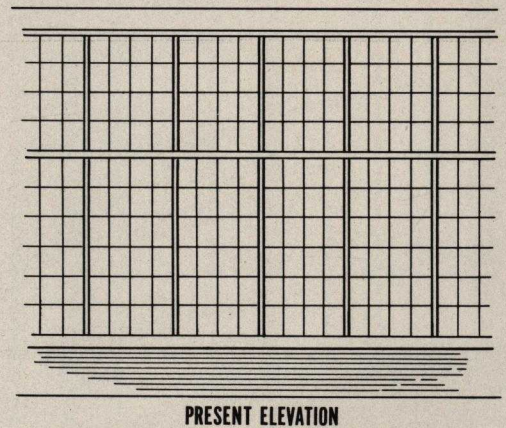
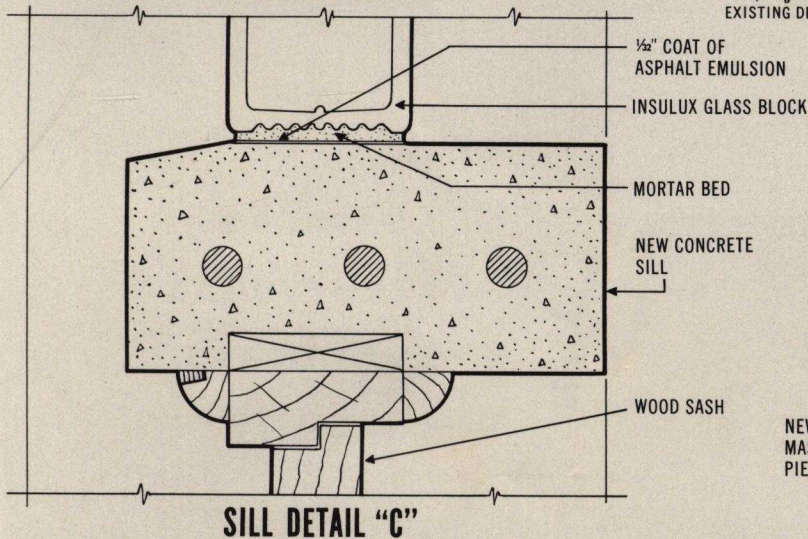
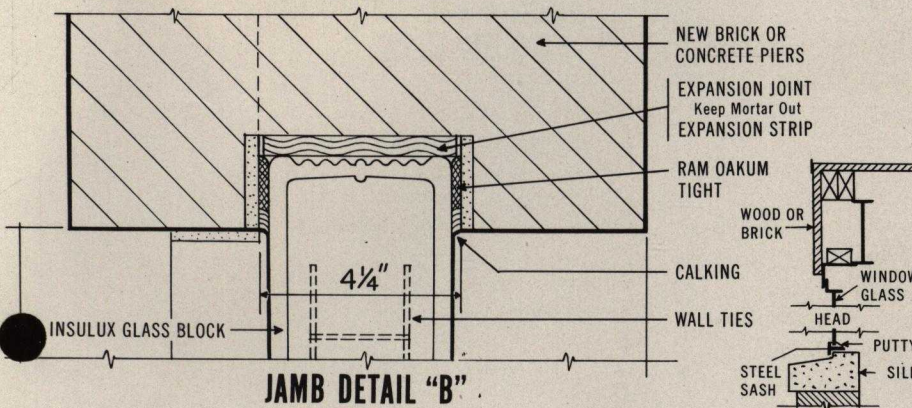
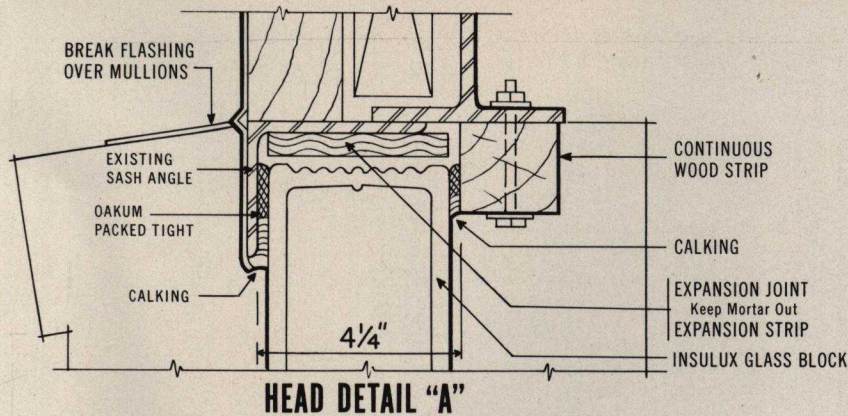
JAMB DETAIL "B"



SILL DETAIL "C"

3" = 1'-0"

HOW TO INSTALL INSULUX FENESTRATION



Continuous metal windows may be replaced by glass block without the use of metal mullions by constructing brick piers in the center of each column bay. The glass block panel is held in place by recessing the panel jambs into chases in the brick piers and by a wood stop bolted to the head as shown. The panel is also tied to the present column by means of wire anchors bedded

in the mortar joints approximately 24" on center. Panels reinforced in this manner can be built up to 250 sq. ft. in area.

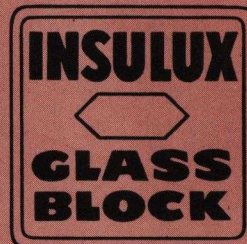
Vision and ventilation are obtained by windows which are installed between masonry piers built up on the present sill. A concrete lintel, supported by the piers, carries the glass block above the windows.

3" = 1'-0"



Figure the Cost

Take the price of a typical Insulux Glass Block panel installation. Subtract most maintenance charges—painting, puttying, etc.—over the *normal* window depreciation period. Subtract substantial fuel savings over the *normal* depreciation period. And at the end of the *normal* depreciation period subtract replacement, because Insulux will be just as good as the day it was installed. Figure it up and you'll see that you can buy permanent walls of daylight at the lowest possible cost—install Insulux.



**AMERICAN
STRUCTURAL
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